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NHTSA-99-6550-9

February 21, 2000

Mr. Steven R. Kratzke
Acting Associate Administrator for Safety Performance Standards
National Highway Traffic Safety Administration
400 Seventh Street, SW – Rm 5401
Washington, DC 20950

Dear Mr. Kratzke,

SUBJECT: Notice of Proposed Rulemaking to Amend FMVSS 105 and 121 – Heavy Vehicle Antilock Brake System (ABS) Performance Requirement (Docket No. 99-6550; F.R. Vol. 64, No. 244, December 21, 1999)

The purpose of this letter is to provide comments on behalf of DaimlerChrysler Corporation concerning the subject NPRM. Our comments are limited to proposed changes to FMVSS 105, and address three aspects of the proposed revisions: 1) the test sequence, 2) stability and control during braking requirements, and 3) test surface specifications. In addition, we noted several deviations from current FMVSS 105 wording in the regulatory text proposed for FMVSS 105 that would significantly alter the current meaning of several provisions in the regulation. These deviations appear to have been inadvertent, insofar as the changes were made without comment in the NPRM. DaimlerChrysler recommends that current FMVSS 105 wording be retained in these cases.

As always, we appreciate the opportunity to provide comments and welcome any questions or concerns that the agency may have with our input.

Test Sequence (FMVSS 105)

As proposed, braking-in-a-curve testing would have to be conducted under both lightly- and fully-loaded conditions. NHTSA has proposed adding the braking-in-a-curve test procedure after the main burnish procedure. However, requiring the braking-in-a-curve procedure to be performed at this point in the test sequence would unnecessarily require an additional cycle of re-ballasting. This extra cycle of removing and adding ballast is time-consuming and can easily be avoided by inserting the braking-in-a-curve test at a later point

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in the test sequence, where there is already a required weight change from the fully-to lightly-loaded condition.

DaimlerChrysler recommends that the braking-in-a-curve procedure be performed following the first reburnish procedure. This alteration in the proposed test sequence will reduce testing cost and burden, and will not, in our estimation, affect test results. Specifically, we recommend that "Table I- BRAKE TEST PROCEDURE SEQUENCE AND REQUIREMENTS" be modified as follows:

1. Instrumentation check
2. First (preburnish) effectiveness test
3. Burnish procedure
~~4. Braking-in-a-curve test~~
4. Second effectiveness test
5. First reburnish
6. Braking-in-a-curve test
7. Parking brake
8. Third effectiveness (lightly loaded vehicle)
9. (unchanged through 19.)

This sequence would allow for the lightly-loaded braking-in-a-turn procedure to be immediately followed by the lightly-loaded third effectiveness procedure, without unnecessary re-ballasting, for all vehicles over 10,000 GVWR, with the exception of school buses. (School buses are the only vehicles over 10,000 GVWR that are required to conduct the Parking Brake test.)

Stability and Control during Braking (FMVSS 105)

Section S5.1.7 "Stability and control during braking" stipulates that the test vehicle must complete the required stop "at least three times within the 12-foot lane, without *any part* of the vehicle *leaving* the *roadway"* (emphasis added). It is unclear as written how NHTSA defines the italicized clause. As written, this clause could effectively reduce the lane width by several feet, depending upon how much overhang a given vehicle has, particularly in the rear. DaimlerChrysler recommends that the italicized clause be modified as follows: "without any tire point-of-road contact leaving the roadway." This would clarify the requirement and make it more easily measurable, while also minimizing unitended compliance implications based on body design.

Specification of the Testing Surface (FMVSS 105)

Section S6.9.2(b) in the NPRM specifies that the test surface must be have a peak friction coefficient (PFC) of 0.5, and that it must be wet. DaimlerChrysler recommends that the stipulation that the test surface must be wet be removed from the requirements for test surface preparation. The test surface mu property is adequately specified by stipulating that it must have a PFC equal to 0.5, and by specifying the ASTM procedure according to which the PFC is to be measured. While achieving 0.5 PFC may currently require wetting the test surface, it is conceivable that a test surface material might be developed in the future that

would not require wetting to meet the specified PFC. The potential use of such a material at a test facility should be left open by deleting the requirement that the test surface be wet.

Inadvertent Wording Changes (FMVSS 105)

At the end of the NPRM, NHTSA provides the proposed wording of the amended sections of FMVSS 105 that incorporate the changes discussed in the NPRM. In several sections of the proposed wording, apparently-inadvertent deviations from current FMVSS 105 wording have been introduced that substantially alter the test requirements, but which are not mentioned in the NPRM. DaimlerChrysler recommends that the current FMVSS wording be retained in these instances, as listed below.

S7. "..... For vehicles only having to meet the requirements of S5.1.1, S5.1.2, S5.1.3, and S5.1.7 in section S5.1, the applicable test procedures and sequences are S7.1, S7.2, S7.4, S7.5, S7.9, S7.10, S7.11, and S7.18."

In the current version of FMVSS 105, S7.8 is included in the list of procedures and sequences given above, but was dropped from the text that appears above in the NPRM. This omission would have the effect of eliminating the requirement to run the third effectiveness test, which we do not believe was NHTSA's intention. S7.8 should be retained in this sentence.

Conversely, S7.11 is not in the current version of FMVSS 105, but does appear in the NPRM language quoted above. This addition would have the effect of adding the requirement to run the first fade and recovery test on vehicles with a GVWR greater than 10,000 lbs. DaimlerChrysler does not believe this was NHTSA's intention, since the change is not otherwise mentioned in the NPRM. S7.11 should be removed from this sentence.

S7." ..... However, at the option of the manufacturer, the following test procedure and sequence may be conducted: S7.1, S7.2, S7.3, S7.4, S7.5, S7.6, S7.7, S7.8, S7.9, S7.10, S7.11, and S7.18."

As noted in the previous example, S7.11 should be removed from this sentence, also.

S7.5 (b). Service brake system - second effectiveness test. "Repeat S7.3. Then, for vehicles with a . . . ."

The corresponding provision in the current version of FMVSS 105 appears in S7.5, which, due to revised numbering, becomes S7.5(b) in the NPRM quoted above. However, the NPRM wording omits the stipulation "except for vehicles with a GVWR greater than 10,000 lbs," which currently follows "Repeat S7.3" in the subject clause. This would have effect of adding a requirement to run a 30 mph second effectiveness test that is currently not in FMVSS 105, and that was not discussed in the NPRM. The original clause, which states "Repeat S7.3, except for vehicles with a GVWR greater than 10,000 lbs" should be retained. It should be noted that the current wording for this provisions is not completely correct as written, but as NHTSA has not chosen to address this section in the subject NPRM, we believe that the current wording of this provision should remain unchanged for the purposes of this proposal.

Finally, there were two other instances in which words were omitted from the NPRM that are in the current version of FMVSS 105. Although these omissions do not appear to substantively affect the meaning of the provisions in question, DaimlerChrysler believes that the original wording should be retained, unless the changes are noted and described as intentional in the NPRM.

S7. "**..... **The choice of this option must not be construed as adding to the requirements specified in S5.1.2 and S5.1.3."

The current version of FMVSS 105 uses the word “shall” in place of “must” in the sentence above. The word “shall” should be retained.

S7. "..... When the transmission selector is required to be in neutral.....”

The word “control” follows “transmission selector” in the current version of FMVSS. The word “control” should be retained.

Thank you again for the opportunity to provide comments on the subject NPRM. Please call W.R. Edwards (248-576-7303) if you have questions concerning this letter.

Sincerely,

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